Preparing Universities in Africa and Asia for the New Agriculture

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Executive Summary

1. THE CONCEPT

The recent visits by the WorldAgInfo project Design Team to Africa and South Asia observed that agricultural universities are under funded, suffering from poor quality and in urgent need of curriculum reforms. But universities world- wide are noted for their slowness to address their agreed-upon reforms. In addition to the internal reforms of universities, a new set of problems has emerged under the rubric the New Agriculture that is dominated by climate change, biofuels, rising global food prices and food insecurity. But food prices and the share of consumer spending on food will always be at the core of the old and the new agriculture. For example, the critical role of food prices in reducing poverty in poor countries is illustrated by a recent IMF report that consumers in Africa spend 60 percent of their budget on food as compared with 30 percent in China and 10 percent in the United States. Without question, institutional innovations and public-private sector partnerships are needed to generate human capital and institutional reforms to drive down real food prices as well as addressing the challenges of the New Agriculture. This will require changes in a wide range of incentives for innovation and new types of public, private and university partnerships that foster an exchange of information, knowledge, and global experience (IAASTD 2007).

But instead of the Ag Info Design team preparing a supply side approach of assuming that they know what should be done to needs to identify and solve the problems of universities in other continents, this project focuses on incentives for bottom up debates among scholars and stakeholders in South Asia and Africa on their problems and pathways to reforming their institutions.

This project has four interconnected components: the first is helping universities and consortia of universities in Africa and South Asia prepare a landscape analysis of the magnitude and country-specific challenges and funding levels to address the issues surrounding the New Agriculture. The second component is to lay out the types of Business Education training that is needed at different levels of the educational ladder for extension workers, and smallholder farmers and input and marketing agencies. The third is to lay out the types of ICT training modules about the New Agriculture that are needed to train extension workers, smallholders, private firms and the Third Sector. The fourth objective is to request bottom up proposals of how public and private universities in Africa plan to respond to the New Agriculture and to increase their emphasis on graduate training within Africa because of the rising cost of overseas graduate education.
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2. RATIONALE AND EVIDENCE THAT THE PROJECT CAN BE SUCCESSFUL

The first three objectives of this proposal will be developed jointly by Dwight and CKE.. We shall nowcomment on the fourth objectives of building Africa's science base to address the New Agriculture by fostering graduate education in Africa by expanding graduate training in Africa. In many developing countries, the reliance on overseas training to develop qualified staff for agricultural teaching, research and extension is no longer feasible because of donor reluctance to pay the rising cost of overseas graduate education and the number of graduates who do not return home.

The cost of graduate training in agricultural economics in 2006 in various universities around the world is displayed in Table 1.The cost in the United States was about $30,000 per year or $60,000 for a two year M.S. degree. The cost of an additional three years for a Ph.D. is $90,000 for a total of $150,000 for the two degrees. These comparative cost estimates dramatize why it is time to shift the center of gravity of post graduate training in agriculture from overseas to Africa. Africa has much to learn from the global experience (Eicher 1996) as well as that of its own experience. For example, the collaborative Master of Science Program in Agricultural Economics in Eastern and Southern Africa (CMAAE) is now in its third year of operation. The success of this innovative program raises two questions: First should CMAAE expand its geographical coverage from Eastern and Central Africa to include West Africa? Second, should the CMAAE model be cloned and set up as a separate organization with a base in West Africa similar to the PhD program in plant science/biotechnology that is being set up by the Alliance for a Green Revolution with a January, 2008 start-up at the University of Ghana at Legon? The new model in Ghana will cover West Africa and it is based on the success of the first five years of a plant breeding/biotech Ph.D program at the University of Kwa Zulu at Natal in South Africa.

3. EXPECTED BENEFITS OF THE PROJECT INCLUDING COMMENTS ON SUSTAINABILITY AND SCALE

The coat rack for reforming agricultural universities is combining the research, training and outreach agendas for the New Agriculture with shifting MSc.graduate education from overseas to African universities in an orderly manner. During this transition period, new high priority Ph.D. programs (eg food processing, horticulture etc) can be added in a few universities in South Asia. This coat rack requires funding for scholars in South Asia between ages 30 to 45 to pursue one year sabbatical leaves in the region or in overseas universities. The decline in the number of African students being trained in overseas universities will be offset by a pent-up demand for scholars from South Asia and Africa who have expressed a strong desire for sabbatical leaves, both in the region and overseas.

4. HOW THE PROJECT WILL TARGET THE NEEDS AND BE OF SPECIFIC BENEFIT TO WOMEN SMALLHOLDERS

See ExSum for the gender ExSum

6. MEASURES OF SUCCESS

1. Number and quality of landscape proposals for addressing the New Agriculture
2. Number of students trained in African graduate programs in agriculture
3. Number of sabbatical leaves for academic staff members in south Asia and Africa

4. Number of field trails of innovations in ICT.
5. Number of new degree programs in information technology
6. Number of short courses for trainers of trainers of agricultural biotechnology

7. RISKS

1. This project could be captured by university debaters who are more interested in debates than reforms.

REFERENCES

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2. World Bank. 2008. *World Development Report 2008: Agriculture for Development.* Washington, D.C.: World Bank.

3. Johanson, Richard and William Saint. Forthcoming. Cultivating Knowledge and Skills to Grow African Agriculture: A Synthesis of Research Commissioned by the World Bank. Washington, D.C.: World Bank.

4.International Assessment of Agricultural Science and Technology*(IIASTD)2007.Global Report.* Washington D.C.: IAASTD.

Table 1—Estimated total cost of MSc and PhD Degrees in agricultural economics in various countries in 2006

Degree	Years	University/Country	Estimated Total US$ Cost	Year
MSc	2	U.S. Sandwich*	30,000	2006
MSc	2	U.S. Universities with USAID Fellowships	60,000	2006 (incl. Out-of-state tuition)
M.Sc (Econ)	2	Africa/AERC/Economics**	30,000	2006
MSc	2	CMAAE (Collaborative Masters Program in Agricultural Economics in Eastern, Central and Southern Africa)	20,000	2006
MSc	2	Imperial College, London Distance Learning Program	15,200	2006
MSc	2	Kwa Zulu Natal, South Africa	32,700	2006
MSc	2	Norwegian University of Life Science (UMB)	45,000	2006
PhD	3	U.S. Universities with USAID Fellowships	90,000	2006 (incl. out-of-state tuition)
PhD	3	India Agriculture Research Institution	22,500	2006
PhD	3	University of Agriculture Bangalore (India)	25,000	2006
PhD	4	Belgium (Sandwich degree)***	42,500	2006

Source: Eicher (2007)

*One year in a U.S. university and research at home in year two. Home University awards degree (Eric Crawford).

**The African Economic Research Consortium (AERC) was established in 1988. Currently 21 universities in 17 African countries collaborate and award MSc and PhD degrees in Economics

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